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A Master Plan Approach to Energy & Sustainability

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A proposal for a Master Planning approach to developing a comprehensive central energy system and distribution network, and efficient and sustainable building design.

GREEN LANTERN DEVELOPMENT

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To: State of Vermont, Department of Buildings and General Services
Att: Deborah Damore
Email: SOV.ThePathForward@state.vt.us

Green Lantern Development (GLD) and our partners and affiliates, are a consortium focused on clean-tech, CHP and distributed energy systems, and sustainable development. We engage our engineering and design partners, and leverage our internal project management team and financial resources to plan, design, develop, build and operate energy projects. Our New England office is based in Waterbury, and we have a strong interest in seeing the State Office Complex remain a viable center of the community, and an anchor of the local economy. Waterbury is already known as the Crossroads of Vermont, and the goal of this redevelopment effort should be to showcase how great innovation can be achieved through an intersection of public and private interests.

Over the course of the past three weeks we have discussed the redevelopment of the Complex in great detail at the local level, with policy makers at the State level and within BGS, and with a great number of companies and individuals in the private development sector. At the local level, the common consensus is that the complex is a vital anchor to the local economy. At the State level the concern is that the complex is obsolete; that it is not modern, model workspace for the divisions of State government who work there. In the private development sector the principal concerns are related to the high costs of redevelopment, aging utilities and infrastructure, and the risk associated with making any serious investments without having a long-term commitment from a major anchor tenant, and some commitment from the State to create some financial incentives and to streamline permitting and development.

We propose that the State adopt a Master Plan approach to the redevelopment of the complex, and to include at its core a comprehensive energy and sustainability plan. This approach will allow for proper consideration of all the proposed mixed-uses, will provide clarity on the issues related to permitting and historic preservation, and will answer the many questions related to shared utilities and infrastructure. The end result of this process will be a development that

thoughtfully incorporates local, State and private developer interests, and enduring, flood-resistant design.

The primary interest of Green Lantern is to to take a leading role in the implementation of a clean, reliable, low-carbon central energy system that serves the entire complex and has the potential for expansion to the downtown community. In the private development sector, we have strong relationships with many of the architectural firms, consultants, general contractors and development firms that are submitting responses to this RFI. We have strong relationships at the State level, and have worked with BGS in the past. On the local level we have local partners, strong ties to the community, and the ability to oversee and manage the community engagement aspects of the project. Our ability to coordinate the development of a comprehensive energy system with multiple constituent groups is a core competency of our team, and will be critical to the success of the redevelopment effort.

Luke Shullenberger
Managing Partner

Experience

Company Profile

Green Lantern Development Group (GLD) is a developer of distributed energy projects including industrial CHP, district/campus energy, waste-to-energy, and industrial waste-heat recovery. GLD works with real-estate developers, institutions, schools and companies to develop turn-key energy solutions under variety of ownership and financing structures. On projects like this where there are multiple entities and a variety of mixed-uses, the most appropriate development model is an Energy Services type of structure, with long-term Power Purchase Agreements in place with the end-users. Under this scenario GLD would work with funding and financing partners, an EPC contractor, and operating partners to form a consortium that would design, build, own, operate and maintain the facility. Our initial scope of work during the Master Plan phase would include: detailed feasibility studies, design and pre-construction project management, financing and deal architecture and legal/permitting. Our scope of work during the Development and Construction phase would include detailed engineering and construction project management, equipment procurement, commissioning, and ongoing support and stabilization.

Local Partners – David Rapaport and ReBuild Waterbury

Local coordination and effective community engagement will be an important piece of any successful public-private partnership to re-develop the State Office Complex. To this end, GLD will engage David Rapaport as a consulting developer, and he will serve as a liaison between the local community, the State and the various private developers. In the Waterbury business and political community there are some strong notions on the scope, scale and timeline for the redevelopment effort. David will make key contributions to a master planning and master development of the complex by helping engage local stakeholders, so as to achieve the development of a thoughtful and enduring project. David has worked in executive management positions at Seventh Generation and Northern Power Systems. In the public policy arena David has served in leadership positions at VPIRG and Renewable Energy Vermont. In the local community, he has served on the Duxbury Development Review Board and on the Revitalizing Waterbury committee. His balanced, non-partisan approach, and ability to create consensus among diverse interest groups will be an asset to the redevelopment effort.

Background and Experience

The partners and principals of GLD have an average of 25 years of experience in executive-level management in the construction, real-estate development and financial consulting industries,

and have worked on a wide range of projects across North America and abroad. GLD's financial partners and affiliates are leaders in the clean-tech, energy and infrastructure sectors.

GLD, its partners and affiliates are members of the International District Energy Association (IDEA), the EPA Combined Heat and Power Partnership, Biomass Thermal Energy Council (BTEC), American Council on Renewable Energy (ACORE), and US Green Building Council.

Current reference projects:

1.) **St. Johnsbury Community Energy—Community-Scale District Energy system**
This project is being developed in collaboration with Kingdom Development Co. (KDC) in downtown St. Johnsbury. The project consists of a biomass CHP plant and district heating system to serve the campus of St. Johnsbury Academy, the St. J Public Schools and institutional buildings on the Main St. of St. Johnsbury. At this juncture engineering and design work has been completed to a level sufficient to support permitting and financing, energy contracts are being executed with the principal customers, and the development team is working to complete an equity transaction with investors, and working with VEDA to secure tax-exempt bond financing. GLD and KDC anticipate that the project will commence construction during Q1 of 2012.

2.) **Industrial CHP – Dairy Processor**
GLD is working with a large mid-west dairy cooperative on a complete system upgrade. A new CHP system will provide process heat to a cheese-making facility, and additional thermal and electricity to a direct-drive refrigeration system at an adjoining cold-storage warehouse. This new system will significantly increase the efficiency of thermal delivery to the facility and will dramatically reduce overall energy expenditures by off-setting 100% of the electricity purchases at the cold-storage facility. GLD is working with the customer to secure a federal grant, and will conduct Level I and Level II feasibility studies along with an engineering partner, in preparation for securing financing for the project. Construction of the new facility is scheduled for spring of 2013.

3.) **Green Mountain Biomass**
GLD Managing Partner Luke Shullenberger secured a community scale grant award from the Clean Energy Development Fund of Vermont and conducted a Level I and Level II technical and financial feasibility study for a project in Lyndonville, VT. The original project concept included an energy park consisting of a 2.2MW CHP plant and an onsite pellet mill, and community-scale district energy system to distribute thermal from the CHP plant to the downtown Lyndonville area, Lyndon Institute and Lyndon State College.

Please refer to our website for additional project references and information on our affiliates and channel partners: **www.GreenLanternDevelopment.com**

Energy and Sustainability Master Plan

Vision

Although Hurricane Irene caused catastrophic damage to the State Office complex and other flood-prone areas around the State, we now have an opportunity to create a new vision for how Vermont's historic downtown communities can proactively rebuild for a sustainable future. A thoughtful and responsible redevelopment of the complex, through public-private partnerships, will allow the State and the private development community to create a replicable model for how to integrate sustainability, energy innovation and economic development with historic preservation. This property can become a flood-resistant, sustainable, energy-efficient, and productive hub for the Waterbury downtown, with a vibrant mix of uses.

GLD, its partners and affiliates have discussed this project at length with a great variety of people in various capacities in the private development community, and at the State offices. There is a common-held belief that public-private partnerships can spur the development of forward-thinking projects. And that a successful master-planned development in Waterbury could transform the devastation of Irene into a positive model for future development around Vermont. The challenge and the opportunity is to determine the level of involvement and financial incentive that the State will need to provide in order to mitigate the perceived risk from the private development community. There are some innovative ideas being discussed that can allow this to happen. A privately developed energy system with a creative funding and financing structure could be the cornerstone of a successful project.

We understand that the State/BGS was already planning significant capital improvements for energy efficiency and weatherization and a major upgrade to the central biomass plant, and that before Irene some design and energy infrastructure consulting had been conducted by consultants. The flood has altered these plans dramatically, and the path forward on these initiatives is in flux. Thus, it is our feeling that if the State decides to pursue a master plan for the complex, that a comprehensive energy system and sustainability plan should be a core component of that effort, and that some long-term commitments from anchor tenants at the complex, including State offices, can allow this to happen.

Key Concepts

Energy infrastructure and sustainable design should be integral to the Master Planning effort. The long-term viability of the project will require that all buildings incorporate sustainable, flood-resistant and energy efficient design. The extra cost associated with these types of building practices dictate that all buildings/end-users in the complex have access to shared

energy infrastructure and affordable heat, power and cooling, so that the long-term economics are attractive enough to developers and investors and prospective tenants.

Sustainable economic development is another concern to be addressed in a Master Plan for the complex. Any thoughtful redevelopment plan for the site should be mindful of both the near-term and long-term impact to the regional economy, and should include anchor tenant(s) and a variety of mixed-uses. The emphasis of the Master Plan should be to retain some state jobs, create new jobs, bring more full-time residents to the community, and to stimulate long-lasting economic activity. With a mix of state employees, new businesses, new residents, and new community space, the complex has the potential to be a vibrant hub for the Waterbury downtown.

Methodology

We propose that the Sate pursue a Master Plan approach for redeveloping the complex that includes a Request for Qualification (RFQ) process to select a well-qualified development consortium that has the expertise, resources and wherewithal to coordinate the redevelopment effort. The alternative would be an RFP process in which the responses may vary widely which could lead to a complex and protracted decision-making process. The risk in this scenario is that competing interests carve up the complex into discordant pieces, without sufficient coordination of shared infrastructure/utilities, without proper consideration of complementary mixed-uses, and without proper consideration of historical sensibilities.

The Master Planning model would allow for responsible development of the site in its entirety, and would accommodate an approach in which multiple entities and sub-developers could collaborate on multiple uses/buildings and create efficiencies by sharing common infrastructure. Some of the uses that we have heard discussed by various groups in the private developer community include:

- Model Work/Office Space: class A commercial office space with modern amenities, some to be leased to State and some as professional offices and business incubator space
- A new medical/mental hospital facility
- Affordable housing
- Market-rate, Condominium/Townhouse residential housing
- Senior-Living or Managed-Care facility
- Community Recreation and Performance Space:
    - Auditorium/performance space
    - Recreation facility: gym, fitness/dance studios, year-round heated pool
- Central Biomass CHP Plant, district energy system, integrated PV, low-energy, carbon-neutral buildings.

Any master plan and all proposed uses would be backed up by a thorough market analysis and review of what incentives might be necessary. Community involvement would be critical at each appropriate stage of the process, as would State participation in decision-making.

State Responsibility

Challenge #1: A Master Planning effort will require a source of funds

Proposal: *The 2011 Legislature already approved $500,000 for design and bid documents for a new biomass plant. These funds could form the basis of a budget for Master Plan effort.*

Challenge #2: The high cost of demolition and re-development of flood-resistant, energy-efficient buildings may be a barrier to entry for developers.

Depending on the final plan and the types and sizes of users/buildings, the redevelopment of the complex may include significant demolition and reconstruction of interior spaces, and/or complete demolition of some structures to be replaced by entirely new structures. In any case there will be significant costs related to re-development and new construction in order to make the space energy efficient and flood resistant.

Proposal #1: Approve Grant/Subsidy for Efficiency and Sustainability Upgrades and Flood Mitigation.

In the RFI documents, the Department of Buildings and General Services references planned capital improvements at the State Office Complex related to weatherization and energy efficiency. The total planned expenditures over the next 5 years are estimated at $10,200,000.

Window Replacement:	*$6,700,000*
Attic Insulation:	*$ 500,000*
Wall Insulation:	*$3,000,000*
Total:	***$10,200,000***

Upon completion of the Master Plan, make this pool of funds available to the Master Developer and Sub-Developers as a grant or subsidy to be awarded on a pro-rata basis ($/sf).

Proposal #2: Use VT State Employee Retirement funds as a pool of low-interest financing.

The VEIC has been promoting the idea of finding ways to use VT State Employee Retirement funds to help finance energy efficiency. Providing some of these funds as a low-interest financing option could stimulate investment in re-development of the complex.

Challenge #3: The high cost of building a new, flood-resistant central energy plant and distribution network.

Proposal: Approve funds for investment in, or as subordinate debt financing for a new Energy System.

The RFI documents reference a planned capital improvement budget of $5,500,000 toward the replacement of the existing biomass plant. These funds could be used by the State as an equity investment in the energy system, OR could be provided as low-interest debt financing to the developer. Having this $5,500,000 available to the project may be enough incentive for a developer to build a system of a scope and scale that could be expanded beyond the boundaries of the complex to become a community-scale system.

Challenge #4: The standard timeline for permitting is long and the costs are high.

Proposal: Centralize and Streamline the Permitting Process.

Help create a process that prioritizes and streamlines permitting related to 250, 248 and Historical Preservation, in the interest of expediting redevelopment of the complex, and incentivizing developers to make investments.

Challenge #5: A high acquisition price for the land/buildings at the Complex may be a barrier to entry for developers.

Proposal: Set a Minimal Acquisition Price for the Land and Buildings to Incentivize and Expedite Investment in the Complex.

Please direct any further inquiries or requests for information and any future Requests for Proposals to:

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